

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

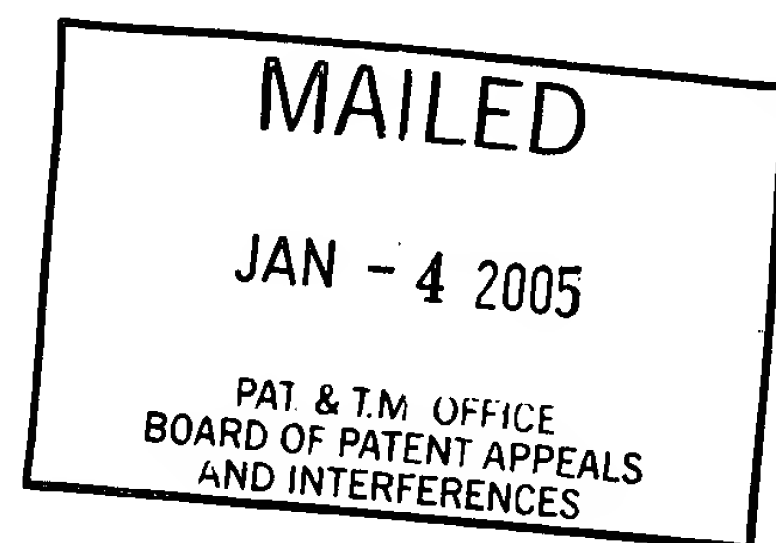
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte WALTER B. HILL JR,
RICHARD L. BARCLAY,
JAMES A. O'MALLEY,
RANDALL W. CONROD,
JOHN DESJARDINS,
and ROGER M. PLOURDE

Appeal No. 2005-0021
Application 09/711,126

ON BRIEF



Before PAK, OWENS, and WALTZ, Administrative Patent Judges.

PAK, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1 through 13, 17 through 24, 31 through 39, 41 and 42. Claims 14, 25 through 30 and 40, the remaining claims in the application, have been withdrawn from

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consideration by the examiner as being directed to a non-elected invention.

Claims 1 and 31, the broadest independent claims in the application, are representative of the subject matter on appeal and read as follows:

1. A method of making paper or paperboard comprising:

a) introducing at least one cellulytic enzyme composition and at least one cationic polymer composition to a paper making pulp within 5 minutes of each other to form a treated pulp; and

b) forming the treated pulp into paper or paperboard.

31. A method of making paper or paperboard comprising:

a) introducing a cationic polymer composition to a pulp to form treated pulp;

b) introducing at least one cellulytic enzyme composition to said treated pulp to form an enzyme-treated pulp;

c) adding a nitrogen-containing cationic polymer composition to the enzyme-treated pulp; and

d) forming the pulp into paper or paperboard.

The prior art references relied upon by the examiner are:

Sarkar et al. (Sarkar '497)	5,169,497	Dec. 8, 1992
Sarkar et al. (Sarkar '914)	5,507,914	Apr. 16, 1996
Vaheri et al. (Vaheri) (Published European Patent Application)	0 433 258 A1	Jun. 19, 1991
Jaquess (Published International Patent Application)	WO 99/43780	Sep. 2, 1999

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Claims 1, 3, 4, 6, 8 through 11, 13, 17 through 22, 24, 31 through 36, 38, 39, 41 and 42 stand rejected under 35 U.S.C. § 103 as unpatentable over Sarkar '497 with or without Sarkar '914. Claims 2, 7, 12 and 23 stand rejected under 35 U.S.C. § 103 as unpatentable over Sarkar '497 with or without Sarkar '914 as applied to the claims above, and further in view of Vaheri. Claims 5 and 37 stand rejected under 35 U.S.C. § 103 as unpatentable over Sarkar '497 with or without Sarkar '914 as applied to the claims above and further in view of Jaquess.

We have carefully reviewed the claims, specification and applied prior art references, including all of the arguments advanced by both the examiner and the appellants in support of their respective positions. This review has led us to conclude that the examiner's Section 103 rejections are not well founded. Accordingly, we reverse the examiner's decision rejecting the claims on appeal under Section 103 for essentially those reasons set forth in the Brief and the Reply Brief. We add the following primarily for emphasis and completeness.

We find that Sarkar '497 and '914 teach treating paper pulps with a cellulytic enzyme and then with a cationic polymer to improve the drainage or the freeness of the pulps. See, e.g., Sarkar '497, column 3, lines 3-22 and Sarkar '914, column 3, lines

24-28. Therefore, the dispositive question is whether it would have been *prima facie* obvious to introduce the cationic polymer to the paper pulps first before adding the cellulytic enzyme or introduce the cationic polymer to the paper pulps within 5 minutes of adding the cellulytic enzyme. Compare claims 1 and 18 with Sarkar '497 and '914. On this record, we answer this question in the negative.

As properly argued by the appellants, Sarkar '497 and '914 teach treating the paper pulps with the enzyme first before introducing the cationic polymer. See Sarkar '497, column 3, lines 16-19, column 8, lines 60-65 and column 10, lines 2-3, and Sarkar '914, column 3, lines 24-28. Sarkar '497 and '914 also state (Sarkar '497, column 3, lines 19-22 and Sarkar '914, column 3, lines 27-31) that:

It is also important to the successful practice of the invention, that the conditions under which the treatment with the enzyme occurs is such to provide optimum reaction time of the enzyme with the pulp.

Sarkar '497 exemplifies introducing the cationic polymer to the paper pulps after treating the pulps with the enzyme for at least 10 minutes to 100 minutes, with the optimum enzyme treating time being about 59 to 60 minutes and the minimum enzyme treating time being about 20 minutes. See column 3, lines 23-27, column 4, Table

1, column 5, Table 4, column 6, Tables 5-7, column 10, Table 1 and column 13, lines 25-27. Sarkar '914 also teaches employing an enzyme treating time of 30 to 60 minutes. See column 3, lines 33-37 and column 6, lines 8-9.

It follows that Sarkar '497 and '914 as a whole would not have led one of ordinary skill in the art to employ in a pulp treating process the claimed polymer-enzyme sequence or the claimed enzyme treating time. See *In re Sebek*, 465 F.2d 904, 907, 175 USPQ 93, 95 (CCPA 1972) ("Where, as here, the prior art disclosure suggests the outer limits of the range of suitable values, and that the optimum resides within that range, and where there are indication elsewhere that in fact the optimum should be sought within that range, the determination of optimum values outside that range may not be obvious."). There simply is no motivation or suggestion to employ the claimed enzyme treating time which is at least twice, four times or six times less than those disclosed in Sarkar '497 and '914 or to employ the claimed sequence which is totally opposite to the very sequences taught by Sarkar '497 and '914.¹

¹ The examiner does not refer to any teachings in Vaheri and Jaquess to remedy the above deficiencies of Sarkar '497 and '914. The examiner relies on Vaheri and Jaquess to show the limitations recited in certain dependent claims.

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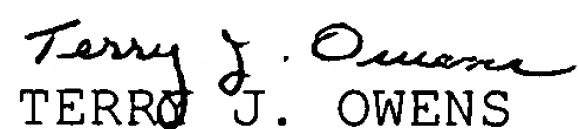
Thus, based on the totality of record, we determine that the examiner has not established a *prima facie* case of obviousness within the meaning of 35 U.S.C. § 103. Accordingly, we reverse the examiner's decision rejecting all the appealed claims under 35 U.S.C. § 103.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

REVERSED



CHUNG K. PAK
Administrative Patent Judge



TERRO J. OWENS
Administrative Patent Judge



THOMAS A. WALTZ
Administrative Patent Judge

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